

## CLAIMS

73. A method for identification of a protein comprising:

- (a) exposing the solution containing microorganisms to conditions resulting in the rupture of the microorganism and spilling of the contents into the solution selected from the group comprising chemical treatment, holins, enzymatic treatment, freeze-thaw cycling, bacteriophage infection, and physical treatment.
- (b) exposing a solution containing the protein analyte to a ligand specific for the analyte of interest that has been covalently tethered with a photostable linker to a substrate surface;
- (c) separating the bound analyte from the non-binding components of the solution containing the analyte by physical separation; and
- (d) interrogating the ligand-tethered substrate surface for analyte binding wherein the ligand is tethered at a distance of at least six Å from the substrate surface for the capture of proteins.

74. The method of claim 73, wherein the ligand is a peptide specific for the protein of interest.

75. The method of claim 73, wherein the detection is via the intrinsic fluorescence of the captured protein.